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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,245	03/14/2001	David Emil Nelson	DP-300505-DIV	4845
7590 08/06/2004			EXAMINER	
VINCENT A. CICHOSZ DELPHI TECHNOLOGIES, INC. Legal Staff, Mail Code: 480-414-420 P.O. Box 5052 Troy, MI 48007-5052			MAYEKAR, KISHOR	
			ART UNIT	PAPER NUMBER
			1753	
DATE MAILED: 08/06/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/808,245

**Applicant(s)**

NELSON ET AL.

**Examiner**

Kishor Mayekar

**Art Unit**

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 14 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 15-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/04.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because it is not within the range of 50-150 words. Correction is required. See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims <sup>16</sup>1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim <sup>16</sup>1, "said walls" is either lacking antecedent basis or confusing as to which walls are being recited, the one with the conductive prints or the one without.

In claim 21, the detailed step is confusing because as the printing is performed prior to the assembling of the cells into the multi-cell stack, the printing cannot be done on the multi-cell stack.

In claim 25, the claim is indefinite for depending upon a cancelled claim 1. Further, "first electrodes" and "second electrodes" lack antecedent basis. And the phrases "connected with said cells" and "connected with second electrodes" are indefinite for the reference to a method of operating the device.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15 and 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over KIESER et al. (5,746,051) in light of RUAN et al. (6,565,716). KIESER's invention is directed to a device for detoxifying exhaust fumes from

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mobile equipment wherein the exhaust fumes pass through a plasma reactor operating by the principal of dielectrically inhibited (silent) discharge. KIESER discloses in Fig. 3 and col. 3, lines 26-32 that the plasma reactor comprises a housing 50 with a discharge vessel 60 formed of insulating plates 61, a space between the housing 50 and discharge vessel 60 filled with insulation material 52, a number of ceramic plates 74 arranged parallel to one another and to two of the insulating plates 61, the ceramic plates being plated on one side with a permanent adherent metal layer 72, of uniform thickness, serving as an electrode, and electrical leads for connecting electrodes to a generator. RUAN shows that silent discharge reactor is a non-thermal plasma reactor (col. 1, lines 16-59). The difference between KIESER and the above claims is the detailed steps of preparing the plasma reactor. Although KIESER does not detail the method of preparing the plasma reactor as claimed, KIESER's device with all the structures limitations appears to lead one of ordinary skill in the art towards the preparation, absent of evidence to the contrary.

As to the subject matter of claims 18 and 19, RUAN shows in Fig. 8 the embedding of the electrodes between two opposing layers of a dielectric material. The subject matter as whole would have been obvious to one having ordinary skill in

the art at the time the invention was made to have modified the reference's teachings as shown by RUAN because the selection of any equivalent process forming dielectric materials would have been within the level of ordinary skill in the art.

As to claim 20, the reference further discloses the use of catalytic coating (col. 4, lines 1-6).

As to claims 22 and 24, the same is applied to the selection of any equivalent connecting process of the cells.

As to claim 23, the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248, *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

6. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over KIESER '051 in light of RUAN '716 as applied to claims 15 and 17-24 above, and further in view of WATANABE et al. (5,407,639) and/or HOARD (5,746,984). The difference between the reference applied above and the instant claim is the forming is by extruding. WATANABE shows in a silent electric discharge reactor

the forming of a dielectric material by any conventional process prior to the printing of conductive printing (Fig. 8A). HOARD shows in a non-thermal plasma reactor the use of extruded dielectric material (paragraph crossing cols 7 and 8). The subject matter as whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings as shown by WATANABE and/or HOARD because the selection of any equivalent process forming dielectric materials would have been within the level of ordinary skill in the art.

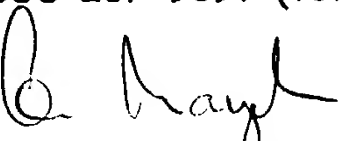
7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over KIESER in light of RUAN '716 and in view of ALIX et al. (6,117,403). The further difference between the reference as applied above and claim 25 is the way the electrodes are connected. ALIX shows in a plasma reactor the connection of one of the electrodes to ground and the other to a high voltage alternating current power supply (Fig. 3). The subject matter as whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings as shown by ALIX because this would result in stabilizing an electrical discharge. Further, it has been held on the intended use of a device

that "apparatus claims cover what a device is, not what a device does", *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ 2d 1525.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Kishor Mayekar



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Primary Examiner  
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